

KANFIT Ltd

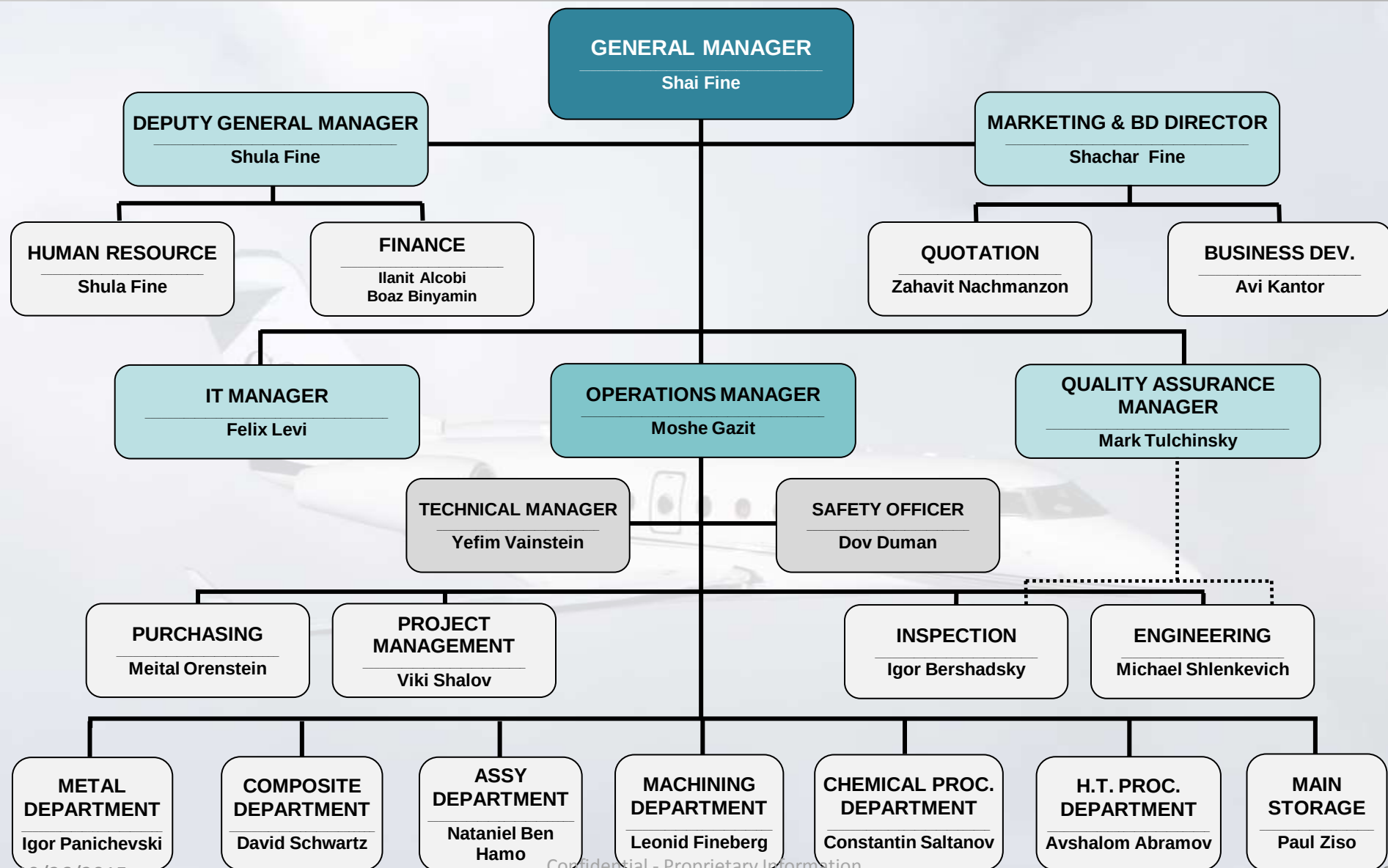


About Kanfit



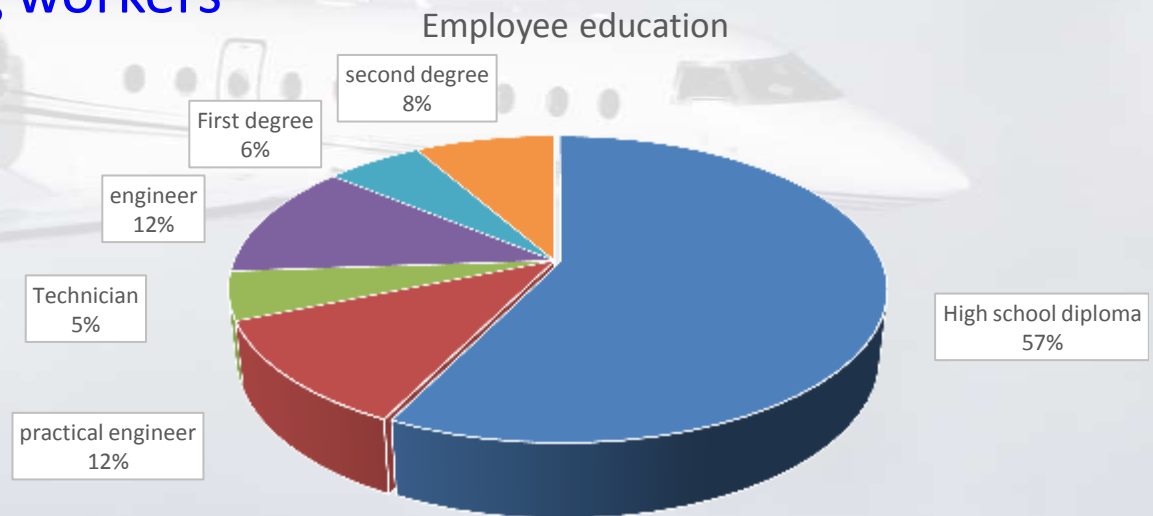
- Aerospace engineering & manufacturing
- Built to spec / print
- Composite materials, sheet & block metal detailed parts and assemblies
- Active in Aerospace, Medical Devices, Wind Energy, Defense, etc.
- Established in 1986
- Privately held

About Kanfit - Organization



About Kanfit – Human Resources

- 170+ employees total
 - 2 Quality assurance engineers
 - 9 Inspectors
 - 9 Manufacturing engineers
 - Mechanical & Aeronautical engineers
 - 9 Project managers
 - 133 Manufacturing workers



Certifications & Qualifications

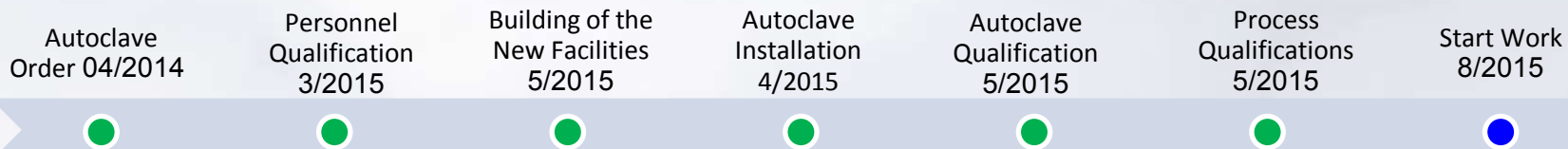
- AS9100C & ISO 9001:2008
- Nadcap
 - Heat Treatment
 - Chemical conversion (Alodine 1200s & 600)
- Global OEM certifications:
 - Boeing – HT & Chemical conversion
 - UTC (Hamilton Sundstrand) - HT
- Accredited for Welding Steel, Stainless Steel, Aluminum and Inconel 625
- Just In Time supplier to customer assembly line
- IAI class 2 certification for structural parts from composite materials





- Newly refurbished 3,200 m² building on 5,700 m² lot
- New autoclave building 850m²
- First floor – Metal manufacturing
- Second floor – Composite parts manufacturing and Assembly

Autoclave Facility



Facility layout

Autoclave features:

- 18' X 7' (5.5m X 2.1m)
- 250°C / 482°F
- 10.3BAR / 149PSI
- 36 Thermocouples
- 10 Vacuum source points
- 10 Pressure sense points



- In-house qualified LAB Capabilities:
 - Physical properties
 - Fiber Volume Content
 - Fiber Weight Content Fraction
 - Void Content
 - Resin Content
 - Density
 - Thickness and visual inspection
 - Mechanical properties
 - Short Beam
 - Drum Peel
 - Compression
- Outsourced
 - Ultrasonic inspection – to be fully insourced during 2015 / early 2016
 - FTIR, HPLC
- Target – complete in-house testing independence

Autoclave Facility

- The autoclave validation and qualification will be based on IAI qualification plan and **Boeing requirements D6-49327 "Qualification of Autoclaves for Metal Bonding and Curing Composite Structure"**
- Sponsored by our customer
 - OJT – **Completed!**
 - Certifications – **Completed!**
- Next steps
 - **BMS5317-4 (eqv) & BMS5578 (eqv)** qualification
 - Additional Autoclave
- Work packages already contracted to Kanfit's autoclave
 - Hybrid main landing gear door (Critical component)
 - Avionics door
 - Wing to belly fairing
 - Wing tip fairings

Kanfit in Space



CF Central Satellite Dish and Hybrid Gore
Kanfit delivered a complete set of dish and gores to the customer
Kanfit parts are in space since 2013

Confidential - Proprietary Information

- New Technologies in Kanfit:
 - Automatic Fiber Placement manufacturing technology
 - AFP machine selection
 - 3D printing
 - Titanium Ti64G5
 - Next steps: Aluminum, Stainless steel
 - Closed shape automatic filament winding & HP-RTM development program with an EU partner
- Co-submitted proposal for EC Horizon 2020 program
- Successfully completed 3 programs with Israel's Office of the Chief Scientist
 - Manufacturing technologies
 - Products



Why Kanfit?

From Specs, drawings or 3D model to serial production:

One stop shop,

A to Z solution provider,

Effective and competitive,

Flexible and responsive

with excellent quality record.

“Zero maintenance subcontractor”

Among Our Clients



Triumph Aerostructures -
Vought Aircraft Division
A Triumph Group Company



M.C. GILL CORPORATION

• Commercial Aviation

- Gulfstream Business Jets (IAI prime)
 - G280 – **4,000** P/Ns / Plane
- Cargo conversion and modification projects
- As 2nd Tier - Boeing, Airbus, Gulfstream, Embraer, Bombardier, Bell, AgustaWestland, etc.
 - 787, A380, Cseries, Relentless, ERJ, AW189, etc.

• Military Aviation

- F15, F16, F18, F35, V22, CH53, CH47, AH64, C17, Eurofighter Typhoon, A400, etc.
- Missile countermeasure systems components:
 - Chaff & Flare magazine & dispensers

• UAVs

- IAI: Heron & Eitan
- Elbit systems: Hermes 450 & 900



- **Composites** (up to 5.5m)
 - Resin transfer molding (RTM)
 - Liquid resin infusion (LRI)
 - Prepreg –oven & vacuum lay up
 - Autoclave 2.13M X 5.5M / 7 X 18 feet
- **Plastic**
 - Hot & vacuum forming
 - Transparencies
- **Sheet & Block Metal** (sheet metal up to 2.2m, machining 1,020x650x550(mm))
 - Machining
 - Forming
 - Welding
 - Heat treatment
 - Chemical conversion
 - Painting
- **Assembly** (up to 3.5m)

Bonded Assemblies



Bulkhead



Wingtips



Air Manifold



Wing Rib with embedded fuel system component

RTM

Chaff & Flare Magazine - Design & Manufacture



RTM Antennas



Single shot metallic, composite and polymeric
structure with conductive paint, delivered ready to
mount to customer

Carbon Epoxy Wing

This unique wing was manufactured by Kanfit with the following attributes:

- 1600mm length
- 60% Carbon volume
- $\pm 0.1^\circ$ torsion
- $< 0.1\text{mm}$ airfoil deviation
- $\pm 1\text{mm}$ dihedral
- 130°C Tg.



RTM



According to the customer, ***“there is no other wing in the world with such performance...”***



Engine Cowlings



Tubes & Ducts (and accessories)

• Mandrel Types

- Metal
 - Single Body
 - Multiple Parts
- Inflatable
- Washable
- Wax



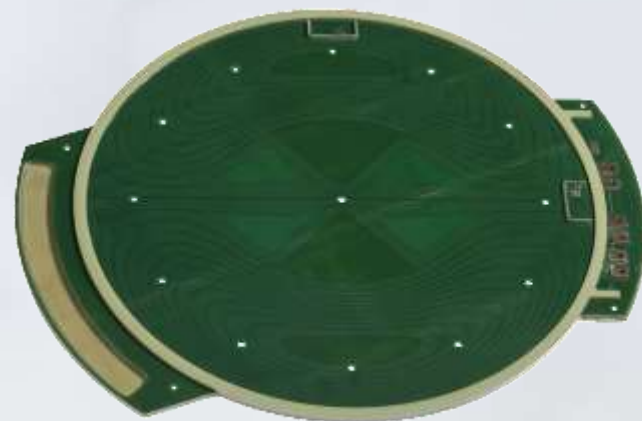
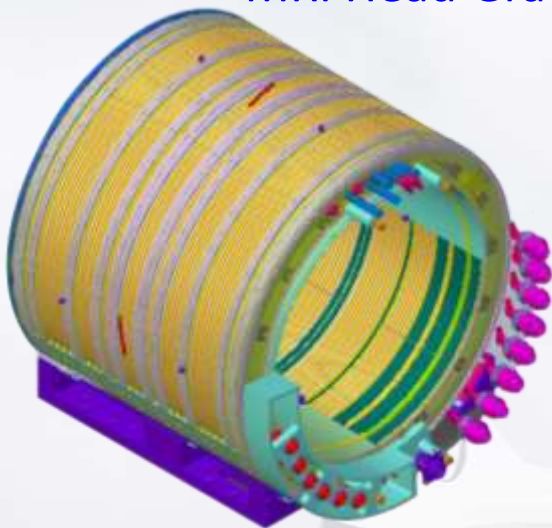
Medical Devices

High accuracy ($\pm 30\mu\text{m}$) RTM glass polyester structure

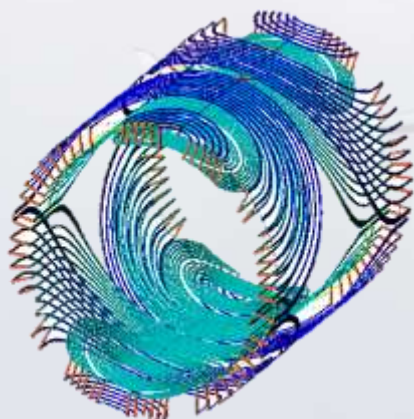


Medical Devices

MRI Head Gradient



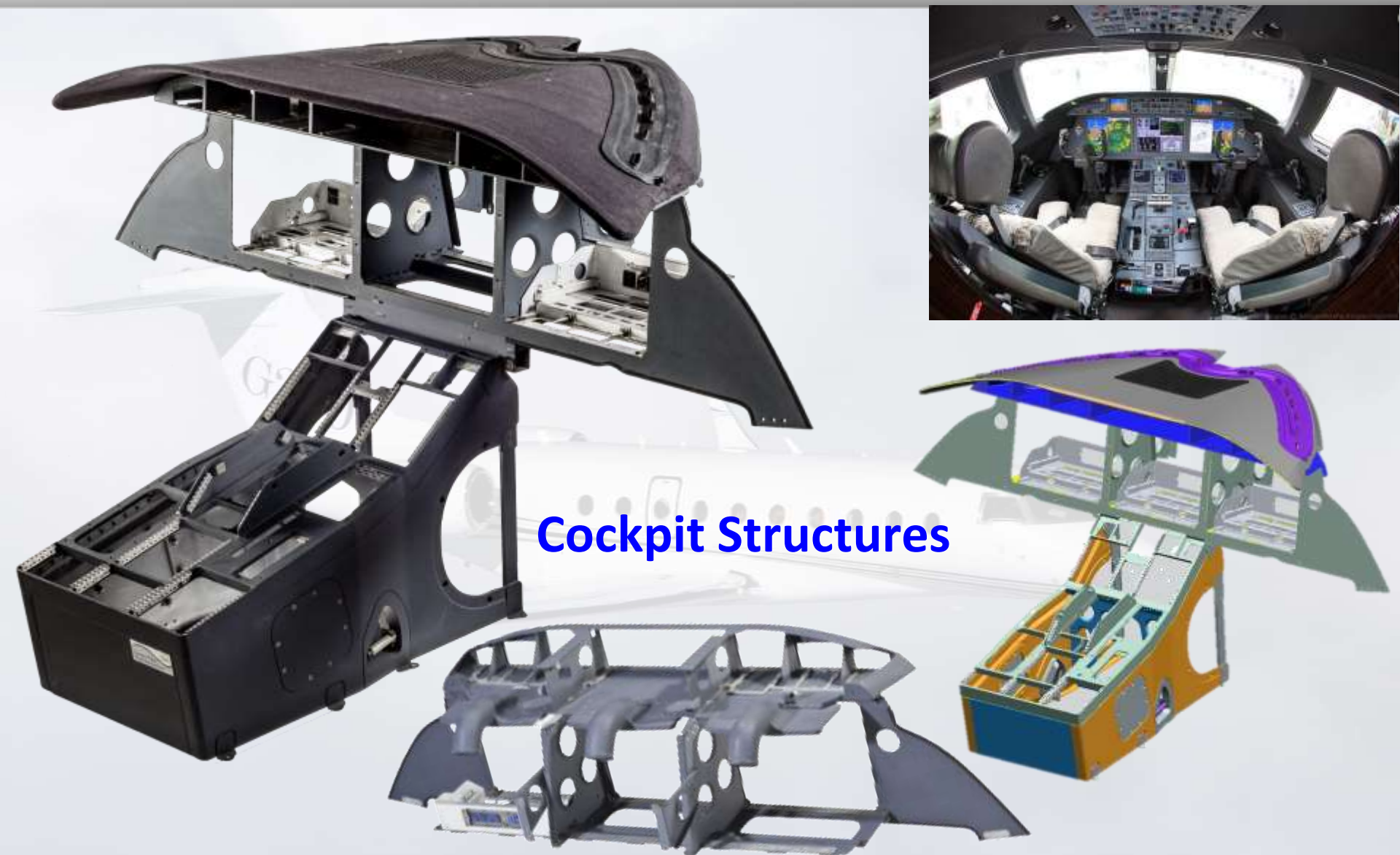
MRI Magnetic Panel



MRI Body Gradient



Hybrid Structures



Vacuum Forming



Hot Forming



G150 Business Jet Microphone
Holder - ABS

Transparencies



Dornier D28 Pilot Windshield

- Forming
- Machining
 - CNC / Conventional
 - High speed CNC router
- Argon TIG Welding
- Chemical Processing
 - Alodine 1200s / 600
- Heat Treatment (AL alloys)
- Painting Chamber



Metal Technologies



Forming



Machining



Thick sheet Forming



Various Primary Parts

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Sub-Assemblies



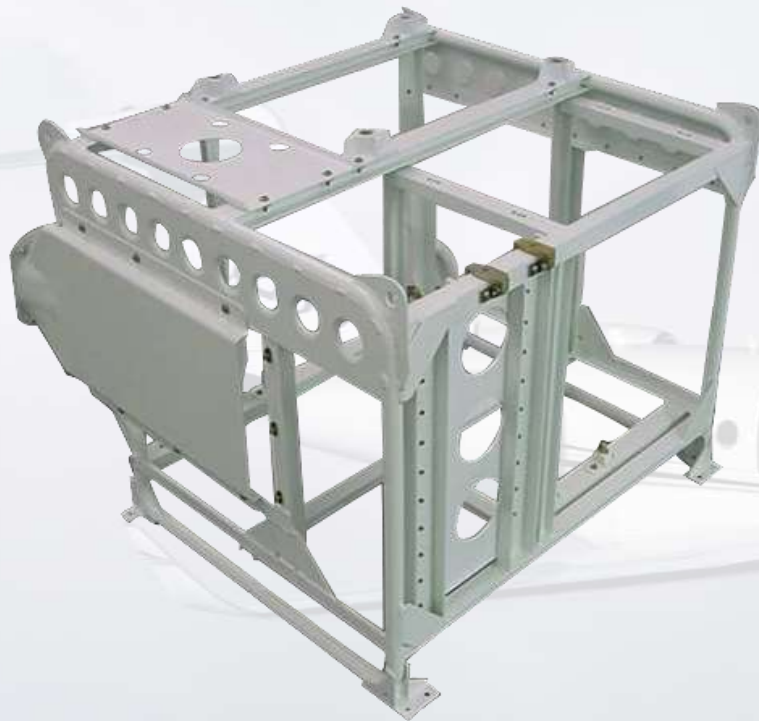
Metallic Tubing Components



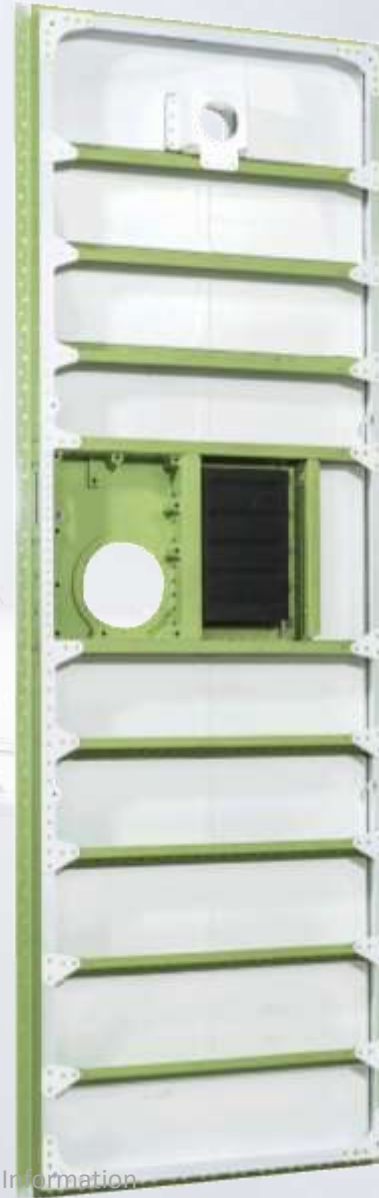
Welding



Tubing, Welding and Composites



Electronics Tray - Metal and Composite



Auxiliary
Door (cabin
to baggage)

Doors



Gulfstream Main Landing Gear Door
All Metal



Gulfstream Hybrid Avionics Door
Composite Skin,
Metallic Hinges, Latch Assemblies

Delivered to our customers, “ready to fly” directly to assembly line

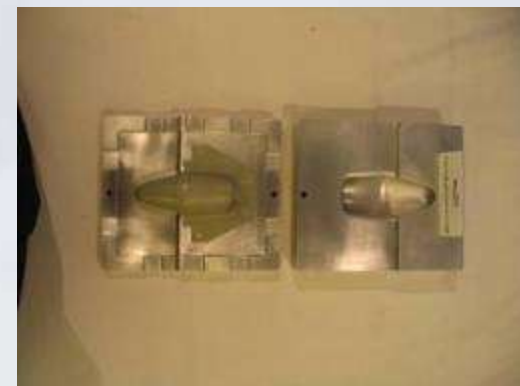
Design & Manufacturing



Extremely Tight Tolerance
RTM Tool



Leading Edge, UH-60 Tail Boom,
High Temperature Composite Tool



High Precision Camera
Housing LRI Tool

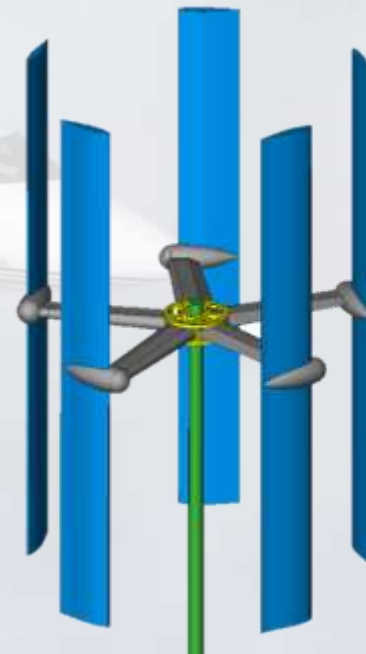
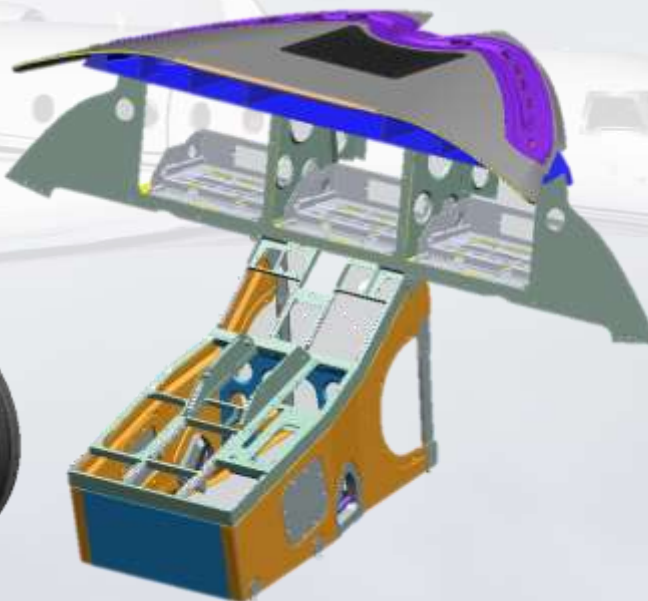
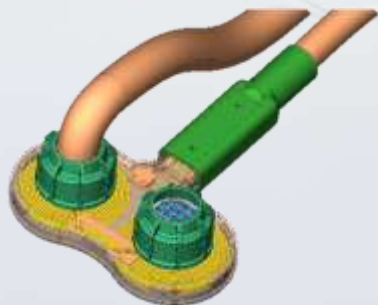


F16 CFT Trim & Drill
Tool



High Precision Space
Antenna Assembly Tool

- Metal, Composite and Hybrid design
- Manufacturing engineering
 - more than 25 years of experience
- Tool design for production and assembly of airframe components, metal and composite
- Engineering software available in house:
 - CATIA V6
 - Unigraphics NX8
 - MasterCam
 - Cimatron





All composite parts were manufactured by Kanfit:

- Fairings
- Driver seat
- Aerodynamic spoilers

Kanfit is a proud sponsor of the Technion student race car project.

This is our way to nurture the next generation of engineers for Israel's composite industry.

2015 – Kanfit will manufacture the Aerodynamic spoilers and wheels from carbon.

2014 – car won the FIAT group prize for visual design and execution.



Caring for the Environment

Our goal: Leave no environmental footprint for future generations

Our strategy: Minimize environmental impact of our processes & facilities by:

- 
- A white business jet, identified by the tail number G280, is shown in flight against a light blue sky. The aircraft is positioned diagonally across the frame, with its tail towards the top left and its nose towards the bottom right.
- ❖ Reusing & recycling materials and water
 - ❖ Lowering energy consumption
 - ❖ Managing waste responsibly
 - ❖ Minimizing greenhouse gas emissions
 - ❖ Reducing product & shipping packaging

Our Vision:

- Providing top quality innovative solutions to our customers
- To become the “supplier of choice” to world market leaders
- A long lasting profitable & sustainable company



Our core values:

- Excellence at all levels of performance
- Innovation and teamwork in everything we do
- Provide our employees a safe and fair work environment
- Leave no environmental footprint for the future generations



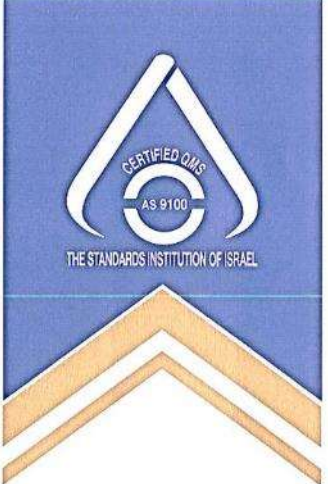
Thank you



- QA certification
- Customer testimonials



[illegible]



Certificate

This is to certify that the
Quality Management System
of

KANFIT LTD

4 Shaul Amor St. Migdal Ha-Emek, 23530, ISRAEL
ISRAEL

applicable to

THE MANUFACTURE OF PARTS AND ASSEMBLIES FROM
METAL, COMPOSITE MATERIALS AND PLASTICS FOR
THE AVIATION INDUSTRY, THE MANUFACTURE OF JIGS
AND FIXTURES.

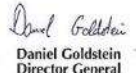
In accordance with the requirements of AS9104/1 Rev. 2012-01

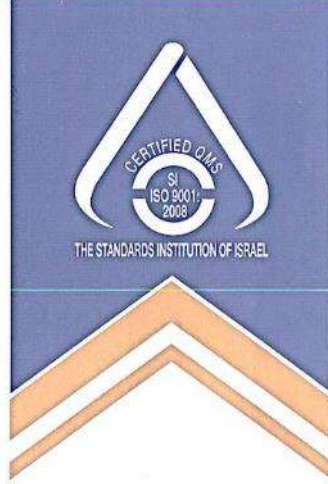
The Standard Institution of Israel is accredited under the Aerospace Registrar Management Program
and declares that the quality system of the above named organization is in conformance with:

ISO 9001:2008/AS9100 Rev.C

ASCS Approval Date: 16 . 05 . 2013	Certificate No: 66265
Reissued: 12 . 06 . 2013	EAC Code: 14/17/21
Valid Until: 20 . 03 . 2015	

www.sii.org.il

Certificate

This is to certify that the
Quality Management System
of

KANFIT LTD.

MIGDAL HA'EMEK, ISRAEL

has been audited by SII and found to comply with the Quality
Management Standard SI ISO 9001: 2008

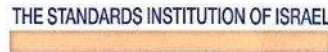
scope:

DESIGN AND PRODUCTION OF JIGS, FIXTURES, PARTS AND
ASSEMBLIES FROM METAL AND COMPOSITE MATERIALS
FOR AVIATION PURPOSES.

The Certificate is granted in accordance with SII's Rules for the Certification of Quality Systems
(AC.04.01 procedure). The validity of the Certificate is subject to the continuous maintenance of the
Quality System according to the above standard, and the follow-up surveillance performed by SII.
Further clarifications regarding the scope of the certificate and applicability of ISO 9001:2008
requirements may be obtained by consulting the organization.

Date of initial approval: 23 . 05 . 1996	License No: 47278
Date of expiration: 20 . 03 . 2015	Date of issue: 12 . 08 . 2013

www.sii.org.il





Boeing D1-4426

Approved Process Sources D1-4426

[Boeing Approved Process Sources - Home](#)

[Nadcap Accreditation](#)

[Notes & Exceptions](#)

[Revision Summary](#)

[User Instructions & Requirements](#)

[Approved Sources Flow Chart](#)

[Approved Processors](#)

[Geographic API](#)

[Process Code Listing](#)

[Specification Index Listing](#)

[Limitation Index](#)

[Boeing Contacts](#)

[Authorized Distributors of Aircraft Bearings](#)

[Authorized Distributors of Designated Fasteners](#)

Document D1-4426 - Processes for BE10371583

Processor Approval Status Updated Daily Revision IQ - March 02, 2015

Detail Information for Processor Code number: BE10371583

Supplier Name:	KANFIT LTD
Address:	4 SHAUL AMOR AVE,
City/town:	MIGDAL HAEMEK
Province/state:	2353004
Country:	ISRAEL
Area:	
Contact Name:	Mark Tulchinsky
Title:	QA Mgr
Phone:	972-4-6547461
Fax:	

* An acronym in the "Nadcap Commodity" column only indicates that Nadcap accreditation may be required for this Process Code. It does not provide any indication of this company's actual Nadcap accreditation status.

Process Code	*Nadcap Commodity	Limitation Codes	Doc Notes	Nomenclature	Specification Number
003	AQS	None	None	Boeing approved QMS as defined in D1-4426 Processor Requirements Sec 6.15.3	Quality System
111	HT	None	None	Heat Treat of Aluminum Alloys	BAC 5602
802	MTL	None	None	Mechanical Testing - Metallic	Mech. Testing
806	HT	None	None	Temper Inspection of Non-ferrous Alloys (Only applies to BAC 5602)	BAC 5946
S111	HT	None		Heat Treating for Aluminum Alloys	PS15500
S325	CP	None	None	Coating - Multicolored Chemical Conversion of Aluminum Alloys by Immersion	PS13209



In accordance with SAE Aerospace Standard AS7003, to the revision in effect at the time of the audit, this certificate is granted and awarded by the authority of the Nadcap Management Council to:

Kanfit Ltd.

4 Shaul Amor Avenue
Migdal Ha-Emek, 23530
Israel

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturers List (QML), to the revision in effect at the time of the audit for:

Heat Treating

Certificate Number: 7757151784
Expiration Date: 30 April 2016



Joseph G. Pinto
Vice President and Chief Operating Officer

Performance Review Institute (PRI) | 161 Thorn Hill Road | Warrendale, PA 15086-7527



In accordance with SAE Aerospace Standard AS7003, to the revision in effect at the time of the audit, this certificate is granted and awarded by the authority of the Nadcap Management Council to:

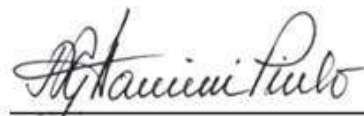
Kanfit Ltd.

4 Shaul Amor Avenue
Migdal Ha-Emek, 23530
Israel

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturers List (QML), to the revision in effect at the time of the audit for:

Chemical Processing

Certificate Number: 7757156062
Expiration Date: 30 April 2015

A handwritten signature in black ink, appearing to read 'Joseph G. Pinto'.

Joseph G. Pinto
Vice President and Chief Operating Officer

Performance Review Institute (PRI) | 161 Thorn Hill Road | Warrendale, PA 15086-7527



Quality

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Approved Supplier List Information

KANFIT LTD

cERP Code: **0000002768**
mERP Code: **None**

Tulsa CICS Code: **None**

SNZ cERP Code: **None**

QA Mgr: **Mark Tulchinski** Phone: **972-4-6547461 x-304**

Primary Address:
4 SHAUL AMOR AVE
MIGDAL HAEMEK,
ISRAEL 23530

SQ Rep: **Glenn, Gerald**
Phone: **316-768-9157**

Supplier Approval Information

Approved for Customers: **IAI**

Quality System Approval Level - **AS9100:C** - [Click for Scope](#)



February 13th 2014

Subject: Kanfit Recommendation Letter

To whom it may concern,

Kanfit is a valued vendor of IAI in large scale projects such as the Business Jet programs (G150, G280), Boeing Dreamliner 787 and other programs.

Kanfit has continually shown high standards of excellence, professionalism and dedication to customer satisfaction in every project it has undertaken. On top of the above, Kanfit has continually shown high customer responsiveness standards.

We are sure that Kanfit will be a tremendous asset to your company.

Sincerely,
Kfir Sharon
Subcontracting Manager
Commercial Aircraft Group



IAI COMMERCIAL AIRCRAFT GROUP
PROCUREMENT AND LOGISTIC
DIRECTORATE

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Sincerely,
Kfir Sharon
Subcontracting Manager
Commercial Aircraft Group

A handwritten signature in blue ink, likely of Kfir Sharon.

Customer feedback

M.C. Gill Corporation have been working with Kanfit since 2009 using their skills in supplying metal detail assemblies in support of our contract with Israel Aerospace Industries/GALP.

Our contract with Kanfit includes the supply of a range of flat/folded/formed metal details including full assemblies and all treatments, painting and finishes. Work must be carried out in strict accordance with models & processes supplied by our customer (IAI) and the end user, Gulfstream Aircraft Inc.

As parts are used in the interior assemblies of the \$15M G280 Executive Jet there are many additional “aesthetic” considerations beyond the normal requirements of supplying structural aircraft parts: these are not always stated in the design dossier and Kanfit have been very helpful in accepting the “spirit” of the program and working to exceed our customers written requirements to fulfil their actual expectations!

To date we have received 217 Order lines totalling 2700+ parts and records show:

Excellent (98%) OTD performance on scheduled Orders.

Impressive response to urgent “AOG”-type short-notice critical requirements.

No significant quality issues and fast resolution of minor issues

Clear, detailed and accurate release paperwork

Fast reaction to requested design changes including costing, re-tooling and FAI completion

We also note that during our comparatively short relationship with Kanfit the company has made significant investments to expand capacity and capability to rival many similar European facilities in the Aerospace sector

We would not hesitate to recommend Kanfit to any company and would be pleased to offer any additional information requested.

Best regards

Gary Morrison
Managing Director

Confidential - Proprietary Information



Customer feedback

Subject: Kanfit Ltd. Recommendation Letter

To whom it may concern,

Kanfit has been a valued supplier to Senior BWT for 5 years, supplying medium & complex fabricated and machined metallic details on a wide range of aircraft programmes.

Senior BWT is primarily involved in supplying composite ducting systems on regional and business jets (including Bombardier GX-5000 AND C-series, Embraer ERJ190, Liebherr Challenger 300 and Superjet and Mitsubishi RJ) and military and commercial helicopters (including Boeing V-22 and Liebherr AW-139).

Kanfit is supplier on all key programmes.

Kanfit have continually demonstrated high standards of professionalism in their dealing with BWT, with excellent customer service and engineering support.

They have maintained high levels of delivery & quality performance, regularly achieving 100% OTIF.

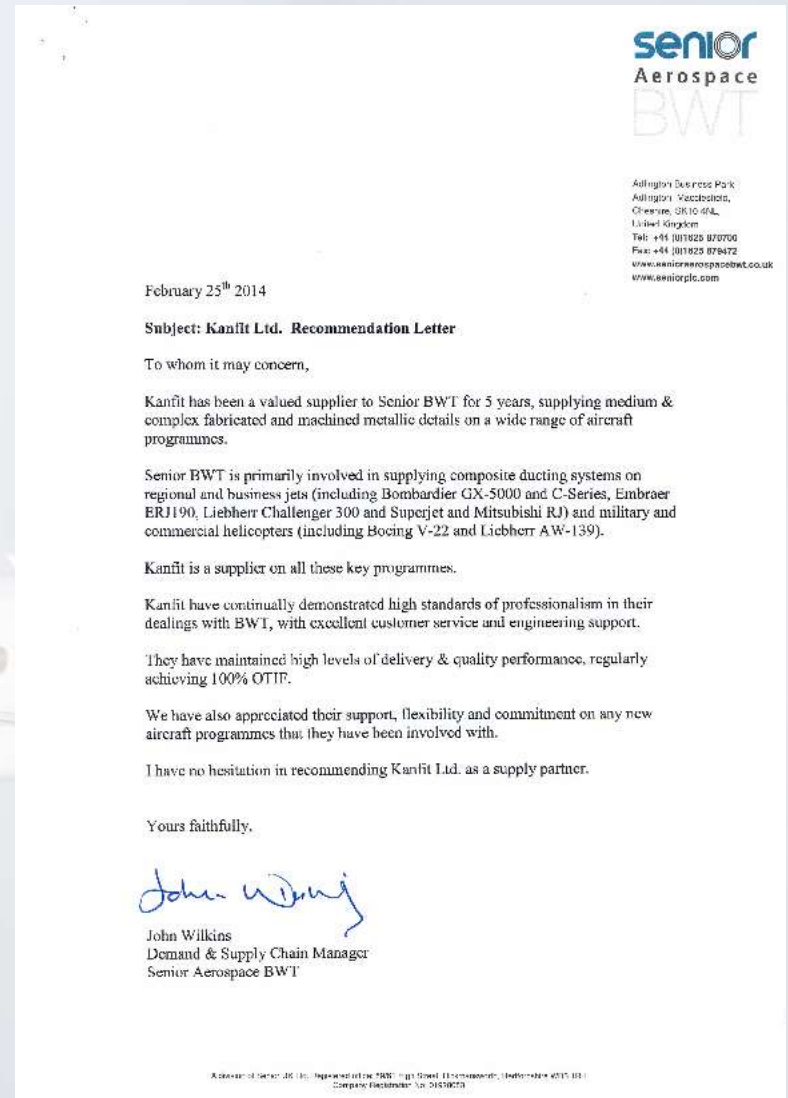
We have also appreciated their support, flexibility and commitment on any new aircraft programmes that they have been involved with.

I have no hesitation in recommending Kanfit Ltd. As a supply partner.

Yours faithfully,

John Wilkins
Demand & Supply Chain Manager
Senior Aerospace BWT

10/26/2015



January 30th, 2014

“

... the parts were received to our full satisfaction...

... I would like to thank you for the efforts you invested in this project and the excellent professional work...

The quality of your parts is significantly higher than parts delivered previously by other suppliers...

”

חברים שלום,

החלקים נקלטו לשביעות רצוננו המלאה.

ברצוני להודות לכם על ההשקעה והמאמץ בפרויקט זה והעבודה היסודית והמצוינת.
תוך הקפדה עד הפרט הקטן ותהליך עדכון השרטוטים מול ההנדסה.
החלקים ברמת איכות גבוהה יותר ביחס לחלקים שהתקבלו עד כה מספקים קודמים.

כרגע נפתח תהליך האישורים מול הצבא.

מאשר בזה המשך ייצור ההזמנה במלואה, אבקש לקבל החלקים הנותרים בהקדם האפשרי.

כמו כן ברצוני לנסות פעם שנייה לבדוק יצור של חלקים אשר הוצעו לכם לייצר במפעלכם.
יתכן ויש דרך להסביר לכם את טכנולוגיות הייצור.

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